


**VAL-MS 320/3+0-FM**

Order No.: 2920243

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2920243>

Surge arrester for 4-conductor power supply systems (L1, L2, PEN), consisting of a base element with remote indication contact and protective connectors, for mounting on NS 35.



| Commercial data          |  |
|--------------------------|--|
| GTIN (EAN)               | <br>4 046356 157087 |
| sales group              | J022   |
| Pack                     | 1 pcs.   |
| Customs tariff           | 85363010   |
| Catalog page information | Page 37 (TT-2011)  |

## Product notes

WEEE/RoHS-compliant since:  
01/01/2007

<http://www.download.phoenixcontact.com>  
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## Technical data

## Standards

|                                    |          |
|------------------------------------|----------|
| Housing material                   | PBT / PA |
| Inflammability class acc. to UL 94 | V0       |
| Color                              | black    |

|  |   |
|--|---|
| Standards for air and creepage distances | IEC 60664-1: 1992-10                    |
|  | DIN EN 61643-11                         |
| Degree of protection                     | IP20                                    |
| Mounting type                            | DIN rail: 35 mm                         |
| Design                                   | DIN rail module, two-section, divisible |
| Number of positions                      | 3                                       |
| Ambient temperature (operation)          | -40 °C ... 80 °C                        |
| Message: Surge protection fault          | Optical, remote indicator contact       |
| Direction of action                      | 3L-PEN                                  |
| Width                                    | 53.40 mm                                |
| Height                                   | 65.50 mm                                |
| Length                                   | 99.00 mm                                |
| Pitch unit                               | 3 Div.                                  |

**Protective circuit**

|   |                              |
|---|------------------------------|
| IEC category  | II                           |
|   | T2                           |
| EN type   | T2                           |
| Nominal voltage $U_N$   | 230 V AC (Max. 240/415 V AC) |
|   | 400 V AC                     |
|   | 230 V AC ... 415 V AC        |
| Arrester rated voltage $U_c$  | 335 V AC                     |
| Arrester rated voltage $U_c$ (L-PEN)                                  | 335 V AC                     |
| $U_T$ (TOV-proof)   | 415 V AC (5 s)               |
| Nominal frequency $f_N$   | 50 Hz (60 Hz)                |
| Standby power consumption $P_c$                                       | $\leq 330$ mVA               |
| Max. discharge surge current $I_{max}$ (8/20) $\mu$ s                 | 40 kA                        |
| Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (L-PEN) | 120 kA (all channels)        |
|   | 40 kA                        |
| Nominal discharge surge current $I_n$ (8/20) $\mu$ s (L-PEN)          | 60 kA (all channels)         |
|   | 20 kA                        |
| Protection level $U_p$ (L-PEN)  | $\leq 1.5$ kV                |

|   |                     |
|---|---------------------|
| Residual voltage (L-PEN)  | ≤ 1.5 kV            |
|   | ≤ 1.4 kV (at 15 kA) |
|   | ≤ 1.3 kV (at 10 kA) |
|   | ≤ 1.2 kV (at 5 kA)  |
|   | ≤ 1.1 kV (at 3 kA)  |
| Response time (L-N)   | ≤ 25 ns             |
| Max. required backup fuse with branch wiring                              | 125 A (gL / gG)     |
| Short-circuit resistance I <sub>p</sub> with max. backup fuse (effective) | 25 kA               |

**Connection, protective circuit**

|  |                                |
|--|--------------------------------|
| Connection method                      | Screw connection               |
| Connection type IN                     | Biconnect screw terminal block |
| Connection type OUT                    | Biconnect screw terminal block |
| Connection method                      | Biconnect terminal block       |
| Screw thread                           | M5                             |
| Tightening torque                      | 4.5 Nm                         |
| Stripping length                       | 16 mm                          |
| Conductor cross section stranded min.  | 1.5 mm <sup>2</sup>            |
| Conductor cross section stranded max.  | 25 mm <sup>2</sup>             |
| Conductor cross section solid min.     | 1.5 mm <sup>2</sup>            |
| Conductor cross section solid max.     | 35 mm <sup>2</sup>             |
| Conductor cross section AWG/kcmil min. | 15                             |
| Conductor cross section AWG/kcmil max  | 2                              |

**Remote indicator contact**

|  |                                |
|--|--------------------------------|
| Connection name                        | Remote fault indicator contact |
| Switching function                     | PDT contact                    |
| Connection method                      | Screw connection               |
| Screw thread                           | M2                             |
| Tightening torque                      | 0.25 Nm                        |
| Stripping length                       | 7 mm                           |
| Conductor cross section stranded min.  | 0.14 mm <sup>2</sup>           |
| Conductor cross section stranded max.  | 1.5 mm <sup>2</sup>            |
| Conductor cross section solid min.     | 0.14 mm <sup>2</sup>           |
| Conductor cross section solid max.     | 1.5 mm <sup>2</sup>            |
| Conductor cross section AWG/kcmil min. | 28                             |

|  |                     |
|--|---------------------|
| Conductor cross section AWG/kcmil max  | 16                  |
| Maximum operating voltage $U_{max}$ AC | 250 V AC            |
| Maximum operating voltage $U_{max}$ DC | 30 V DC             |
| Max. operating current $I_{max}$       | 1.5 A AC (250 V AC) |
|  | 1.5 A DC (30 V DC)  |
|  | 1.5 A AC (125 V AC) |

#### Standards

|                       |                  |
|-----------------------|------------------|
| Standards/regulations | EN 61643-11 2007 |
|                       | IEC 61643-1 2005 |

#### Certificates / Approvals



Certification

CB, CCA, CUL, GOST, KEMA, OEVE, UL

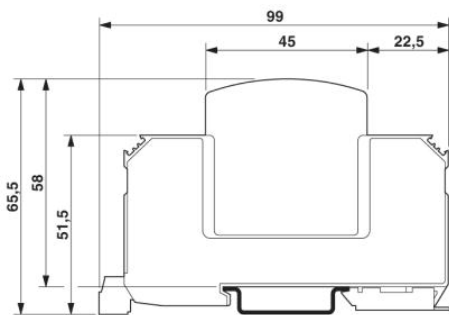
#### Accessories

| Item           | Designation      | Description   |
|----------------|------------------|---|
| <b>Bridges</b> |                  |   |
| 2809241        | MPB 18/3- 6      | Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.                                      |
| 2809254        | MPB 18/3- 9      | Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 9-pos.                                      |
| 2818339        | MPB F200X16/ 1GS | Wiring bridge flexible, diameter 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 200 mm  |
| 2818342        | MPB F400X16/ 1GS | Wiring bridge flexible, diameter 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 400 mm  |
| 2818355        | MPB F600X16/ 1GS | Wiring bridge flexible, diameter: 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 600 mm |
| <b>General</b> |                  |   |
| 2749880        | DK-BIC-35        | Feed-through terminal block for VAL and FLT applications  |
| <b>Marking</b> |                  |   |
| 1051993        | B-STIFT          | Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm   |

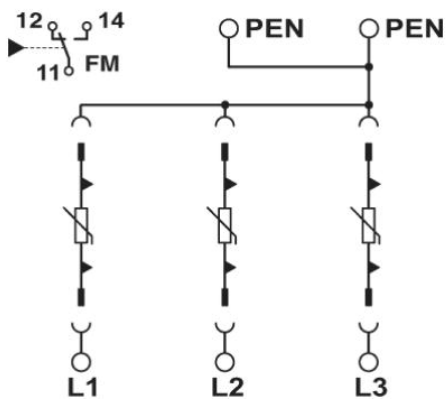
|         |                      |  |
|---------|----------------------|--|
| 2749589 | ZBN 18,LGS:ERDE      | Marking labels, printed horizontally, strips with 5 labels, GND (grounding symbol), color: White   |
| 2749576 | ZBN 18,LGS:L1-N,ERDE | Marker labels, printed horizontally, strips with 5 labels, L1, L2, L3, N, GND, color: white  |
| 0800763 | ZBN 18:SO/CMS        | Marker labels, 5-section, special printing, labeled according to customer requirements (Please specify the required marking with order), for terminal width: 17.5 mm, color: White |
| 2809128 | ZBN 18:UNBEDRUCKT    | Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White                                    |

### Diagrams/Drawings

Dimensioned drawing



Circuit diagram



**Address**

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